DOCUMENT RESUME

ED 134 963 CS 003 223

AUTHOR Grundin, Hans U.
TITLE The Development of Reading and Writing Abilities in Adults.
PUB DATE 76
NOTE 11p.; Paper presented at the Annual Study Conference of the United Kingdom Reading Association (13th, Durham, England, July 26-30, 1976)

EDRS PRICE MF-$0.83 HC-$1.67 Plus Postage.
DESCRIPTORS *Adult Literacy; Adults; Composition Skills (Literary); *Functional Illiteracy; Functional Reading; *Reading Ability; *Reading Research; *Writing Skills
IDENTIFIERS *Sweden

ABSTRACT

In order to assess various reading and writing abilities of adults, for comparison with corresponding abilities of pupils in grades 7 through 12, and to investigate the extent to which adults' reading and writing abilities can be regarded as satisfactory, answers to a series of tests and questionnaire data were obtained from random samples of Swedish-speaking adults born in 1940 or 1950, from Linkoping, Sweden. The tests covered the alphabet, spelling, copying of prose material, reading rate, reading comprehension, practical reading ability, and essay or free writing. Data and test results show that basic reading and writing skills of many adults can be expected to improve--largely as a result of informal education--after they leave school, that prolonged schooling during adolescence leads to even greater improvement in reading and writing ability, that a substantial minority of adults do not reach the minimum level of reading and writing ability necessary for functional literacy, and that more than 30% of the adults found their reading and writing abilities insufficient for at least some of the tasks they undertake or would like to undertake. (JM)

****
* Documents acquired by ERIC include many informal unpublished *
* materials not available from other sources. ERIC makes every effort *
* to obtain the best copy available. Nevertheless, items of marginal *
* reproducibility are often encountered and this affects the quality *
* of the microfiche and hardcopy reproductions ERIC makes available *
* via the ERIC Document Reproduction Service (EDRS). EDRS is not *
* responsible for the quality of the original document. Reproductions *
* supplied by EDRS are the best that can be made from the original. *
****

ED134963

Teachers College of Linköping
Department of Educational Research
Linköping, Sweden

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

"PERMISSION TO REPRODUCE THIS COPYRIGHTED MATERIAL HAS BEEN GRANTED BY

Hans U. Grundin

TO ERIC AND ORGANIZATIONS OPERATING UNDER AGREEMENTS WITH THE NATIONAL INSTITUTE OF EDUCATION. FURTHER REPRODUCTION OUTSIDE THE ERIC SYSTEM REQUIRES PERMISSION OF THE COPYRIGHT OWNER."

THE DEVELOPMENT OF READING AND WRITING ABILITIES IN ADULTS

by Hans U. Grundin, Ph.D.

Paper presented to the Thirteenth Annual Study Conference of the United Kingdom Reading Association, 26th - 30th July, 1976, University of Durham.
(To be published by the UKRA)

Author's address:

18A Rosecroft Avenue
Hampstead
London NW3 7QB, England

CS 003 223

THE DEVELOPMENT OF READING AND WRITING ABILITIES IN ADULTS

by Hans U. Grundin

The development throughout the school years of various reading and writing skills was studied at the Linköping College of Education in the early 1970s. This project surveyed the development from grade 1 to grade 12, i.e. from the age of 7, when children start school in Sweden, to the age of 19. A summary of the results is available in the proceedings of the 1975 UKRA Conference (Grundin 1976b).

One of the main objectives of reading and writing instruction in the comprehensive and upper secondary schools is to help the students to develop abilities which enable them to cope successfully with the reading and writing situations they will meet in their adult life. It is, however, extremely difficult to judge from the performance of students still in school to what extent this goal has been reached. The school's normal evaluation of reading and writing abilities tells us very little about what kind of development we can expect after the students have left school. An attempt in our grades 1 - 12 study to establish whether the reading and writing skills of school leavers are satisfactory according to teachers' judgments was, on the whole, a failaure. The results of this inquiry (cf. Grundin 1975b and 1976a) were very interesting, but mainly because of the insights they gave into the difficulties involved in making judgments about what is satisfactory performance.

In order to find out more about the development of reading and writing abilities in adults the study of students in grades 1 - 12 was followed up with a study of the corresponding skills of adults. The purpose of this study was twofold:

- to assess various reading and writing abilities among adults in such a way that they can be compared with corresponding abilities among pupils in the upper grades of the comprehensive school (grades 7 - 9) and in the upper secondary school (grades 10 - 12);
- to investigate the extent to which the reading and writing abilities of adults can be regarded as satisfactory in relation to their need of such abilities.

Since the study had to be limited in scope it was decided to concentrate on fairly young adults, namely 25-year-olds and 35-year-olds. A study of these two age groups should make it possible to reach some conclusions concerning how reading and writing skills develop during the 15 - 20 year period after the end of formal schooling.

Design and subjects

The study was a survey collecting test and questionnaire data from random samples of Swedish-speaking adults born

in 1940 (i.e. 35 years old in 1975) or in 1950 (i.e. 25 years old in 1975). The reading and writing tests used were the same as those used in grades 6 - 12 in the previous study (cf. Grundin 1975a and 1975c), viz.

- Alphabet test (knowledge of the order of the letters in the Swedish alphabet);
- Copying test (ability to copy a given prose text by means of handwriting);
- Reading rate test (with multiple-choice questions interspersed in an easy prose text);
- Cloze test of reading comprehension;
- Tests of 'practical' reading ability: (a) comprehension of insurance policy text; (b) comprehension of tables and instructions for their use; (c) ability to understand and fill in forms;
- Essay or free writing test (ability to express one's views on a given topic in writing); and
- Spelling test(ability to spell words dictated in sentence context).

The questionnaire comprised questions concerning

- general and vocational education and present occupation;
- parents' education and occupation;
- average amount of reading and writing per day: during leisure time and during working hours;
- self-evaluation of reading and writing ability in relation to perceived needs in one's occupation and in one's private life;
- subjective judgment of the importance of reading and writing abilities measured by the different tests.

The population of subjects for the study was defined as all Swedish-speaking inhabitants of Linköping community (a largely urban area with about 108,000 inhabitants) born in 1940 or 1950. People confined to institutions because of handicaps or illness were excluded. Lists of randomly selected adults meeting these criteria were obtained from the Swedish Central Bureau of Statistics. In all 527 persons were invited to participate and were offered a small honorarium equalling £ 9.50 for attending a two-hour testing session. Slightly more than 70 per cent of those invited participated in the study.

We know very little about the 150 persons (30 per cent of the invited) who did not wish to participate. It seems reasonable to guess, though, that persons with low education and/or reading and writing abilities were more reluctant to participate than other categories. In other words, if the sample of persons included in the study is biased, it is probably biased through over-representation of persons with average or higher than average ability and level of education.

The sample of adults tested, less than 200 per age group, seems small compared to the entire Swedish population of 25 and 35-year-olds (more than 100,000 per age group). The sample has, however, been drawn from the same community as the samples of students in the first part of the research program. The results of comparisons between adults and students should therefore be fairly reliable.

General educational level of participating adults

The general educational level of the adults participating in the study has been expressed in number of years spent in school and in institutions of higher education. This number varies in our sample from 7 years to 15+ years, i.e. from seven-year elementary school to university studies at doctoral level.

There is a marked difference between the two age groups in this respect. The average (median) level of general education is 11.7 years for the sample of 25-year-olds but only 8.7 years for the 35-year-olds. Nearly 40 per cent of the adults aged 35 have only 7 or 8 years of schooling, whereas the corresponding figure for the 25-year-olds is less than 5 per cent. This difference is due to the introduction of compulsory nine-year schooling in Sweden in the early 1960s, a reform affecting those born in 1950 but not those born in 1940. The gradual increase during the 1960s in the recruitment to all sorts of higher education is reflected in the fact that 37 per cent of the 25-year-olds as compared to just 16 per cent of the 35-year-olds have at least one year of higher education.

This difference between the two age groups makes it necessary to take general educational level into consideration in all comparisons between groups of adults and between adults and students in grades 9 - 12. It must also be recognized that 25-year-olds and 35-year-olds with the same amount of schooling are not necessarily comparable subgroups with regard to their expected reading and writing ability. Many of the 35-year-olds with 9 years schooling or less (and they constitute 61 per cent of their age group in our sample) probably could have benefitted from more schooling than they have had. People who are, in this sense, 'undereducated' can be expected to do better on reading and writing tests than people who, with the same amount of schooling, have been educated up to their full 'educational potential'.

At the other end of the scale of general education we find that the recruitment to higher education was much more selective among those born in 1940 than among those born in 1950. To the extent that this recruitment was based on academic ability rather than socio-economic status, we should expect a higher average performance among 35-year-olds with higher education than among 25-year-olds at the same educational level.

These differences between the two age groups of adults included in the present study must always be borne in mind when the test results are interpreted.

Overall comparisons between adults and students

Since the distributions of test scores are more or less skewed (i.e. the tests measure primarily the low and medium range of abilities), overall comparisons among groups of adults and students are based on the median scores for each subgroup. Knowing that the median level of education for the two age groups of adults is 11.7 and 8.7 years respectively, it should be of interest to see what grade levels (as computed from student data) the median performance levels of adults correspond to.

Table 1 shows the grade level equivalents of median test scores for the two age groups of adults. Values above 12.0 are put in parenthesis, since they are computed by means of extrapolation from the results for students in grades 6 - 12. The grade level equivalents in table 1 indicate, then, how the average 25-year-old with 11.7 years of schooling and the average 35-year-old with 8.7 years of schooling perform in relation to students in grades 6 - 12 actually in school. The general trend in the data is very clear: adults perform better on reading and writing tests than students with the corresponding amount of schooling. The difference is, however, particularly marked for the average 35-year-old whose performance is close to grade 11 level although he has less than 9 years of schooling. The average 25-year-old with less than 12 years of schooling perfomr slightly above the median level for grade 12 students.

/ Table 1 in about here /

The mean grade level equivalent for all subtests is 12.1 for the average 25-year-old as compared to 10.8 for the average 35-year-old. The superior performance of the 25-year-old is probably primarily due to his higher level of general education. It should be noted, though, that the difference between the two age groups in general education level is 3 years of schooling, whereas the difference in reading and writing test performance only corresponds to about 1.3 years (when expressed in grade level equivalents). This seems to indicate that the 35-year-olds, many of whom may be regarded as 'undereducated', have been able partly to compensate for their lack of formal education through some kind of informal education in the 'school of life'.

One may conclude, then, that the 'school of life' does play an important part in the development of adults' reading and writing abilities, particularly for those adults whose actual level of education is lower than their educational potential. But the 'school of life', although of great help to those who have not had sufficient formal education, does not seem to be an adequate substitute for formal education. The better educated 25-year-old is, on the average, 1.3 grade level equivalents ahead of the 35-year-old, which indicates that lack of formal education is only partially compensated for in adult life after school.

Development of the ability to cope with real-life tasks

Although the adults on the whole are doing better on our reading and writing tests than students at the corresponding level of schooling, they are not doing equally well on all subtests. On the two tests where rate of reading and writing is of particular importance, the reading rate and the copying tests, adults do not perform better than students. The 25-year-olds perform below their expected grade level on these two tests and the 35-year-olds approximately at their expected grade level (cf. table 1 above).

On most of the remaining tests the 25-year-olds perform at or above the expected level, while the 35-year-olds perform much above the expected level. On one test, the reading test based on common, authentic forms, the average score for both adult groups is particularly high. This forms test calls for the performance of tasks which nearly all adults meet in real life. First-hand experience in filling in these and similar forms can be helpful in two ways in the testing situation: it provides training and feedback concerning success or failure, and it can increase the understanding of the importance of being able to cope with such tasks.

It is, however, also possible to interpret this finding in an other way. Rather than concluding that adults do particularly well on tasks such as filling in authentic forms one may conclude that teenage students do particularly badly on this kind of task. The main argument for this would, of course, be that students are usually poorly motivated for such tasks, since they do not understand the importance of filling in forms correctly. That student performance is particularly poor in the forms test is also indicated by a finding in our survey of abilities in grades 1 - 12 (cf. Grundin 1975c). When teachers' expectations of student performance on various tests were compared to the students' actual performance, it was found that the average student performance usually equalled or even excelled the average teacher expectation. The forms test was, however, an exception, since student performance on that particular test was clearly below the average teacher expectation.

Having noted that adults do better than students on the forms test it is of interest to look at their performance from an other viewpoint: to what extent have they mastered the task of filling in the forms correctly. A score of 0 - 5 points was given for each of the three forms in the test, depending on to what extent they were filled in correctly. Absolute correct completion of all three forms gives a score of 15.

Of the total sample of 371 adults only 43, i.e. 12 per cent, reached the maximum score. A score of 13 or more, i.e. above 80 per cent of the score indicating complete mastery, was reached by 64 per cent of the entire sample, and by less than 50 per cent of the adults with low education (7-9 years schooling). Clearly, most adults did not show complete mastery of the task of filling in these

simple, or only moderately complicated forms, and a substantial minority made several mistakes.

The most difficult of the three forms in the forms test is one sent by the National Health Insurance Authorities to every person who has - or is believed to have - an income. The purpose of the form is to obtain information about personal income for the determination of the size of one's sickness benefit. This form was filled in correctly (5 points out of 5) by only 23 per cent of the 371 adults. Even among adults with higher education it was filled in correctly by somewhat less than one third of the sample. These figures compare favourably with those for students aged 16 - 19 (5 per cent in grade 9 and 17 per cent in grade 12), but they also indicate that many adults cannot cope successfully with the reading and writing tasks with which they are confronted in their everyday life.

I want to point out here that the findings discussed above - however alarming they might seem - do not necessarily imply that adults have less reading and writing abilities than they 'ought' to have. What has been observed is a mismatch between certain tasks which most adults are expected to master and the ability of many adults to cope with these tasks. Logically, the conclusion that the tasks 'ought' to be made less complicated is as valid as the conclusion that the abilities of adults 'ought' to be improved.

The problem of functional literacy

The discussion about the ability to fill in forms has brought us into the field of 'functional literacy'. The ability to cope successfully with various reading and writing tasks imposed upon us in our capacity as citizens, employees or employers, consumers etc. is an important ingredient in functional literacy regardless of how this concept is defined in more exact operational terms. Functional literacy should, however, in my opinion not be narrowly defined in terms of what is practically and economically useful. In principle, a functionally literate person should be able to cope reasonably successfully with those reading and writing tasks that are important to him personally.

There is still no commonly accepted definition of functional literacy in Sweden. It has been argued (Grundin 1976a) that the ability level reached by the average pupil after six years of schooling can be regarded as a minimum criterion of functional literacy for our population. That is, literacy below grade 6 level will rarely be sufficient for adult life, and in many cases even an ability level above that may be totally insufficient in view of the needs of the individual.

Table 2 shows, for various tests, the percentage of adults with low, medium or high level of education who have not performed above grade 6 level (i.e. the median score for students at the end of the sixth school year, at the age

of 13). The corresponding percentages for students in grades 9 and 11 have also been entered in the table. Among adults with 9 years of schooling or less about one fifth have not reached above grade 6 level in their performance on reading and writing tests. Approximately the same proportion of grade 9 students perform at or below grade 6 level.

/ Table 2 in about here /

It seems, then, that after 9 years of schooling a substantial minority of something like 20 per cent of the population will not yet have reached functional literacy. And among those who leave school after 9 years at least 20 per cent remain at this comparatively low level of literacy. (To the extent that our sample is biased through inclusion of too many people with average or higher than average education, the true percentage can be expected to be even higher than 20 per cent.) The 'school of life' earlier referred to does not seem to remedy this lack of functional literacy, except perhaps when it comes to certain 'practical' tasks on which some training is provided in the everyday life of nearly all adults (cf. the results on the forms test, table 2).

Table 2 also gives the percentages of the entire samples of adults aged 25 and 35, who have not performed above grade 6 level. With the exception of the forms test between 5 and 10 per cent of the 25-year-olds have not performed above grade 6 level on the various tests, whereas the corresponding percentages for the 35-year-olds range from 10 to 24 per cent. The results indicate that increased schooling can substantially reduce the proportion of persons who reach adulthood without being functionally literate.

The figures in table 2 are only indicative of the magnitude of this effect of prolonged schooling, since more extensive surveys are needed before we can make highly reliable estimates. It seems, though, as if the prolongation of schooling which took place in Sweden during the late 1950s and early 1960s may have reduced almost by half the proportion of adults in an age group who have not reached the minimum level of ability needed for functional literacy.

The effects of increased schooling, which result in higher performance among 25-year-olds (with an average educational level of 11.7 years) than among 35-year-olds (with only 8.7 years) can, however, be confounded by a developmental effect. If there is a decline in reading and writing abilities either for the whole age group or for certain subgroups, between the age of 25 and the age of 35, such a decline would, of course, also lead to lower test scores for 35-year-olds than for 25-year-olds.

To what extent the difference in performance between 25- and 35-year-olds is due to prolonged schooling and to what extent it is a result of a decline over time in the reading and writing ability of adults cannot be determined on the basis of the data discussed here. There are some

indications, though, that there may be no decline - and even increase - inte abilities of average and above average readers, whereas the abilities of those who leave school as poor readers may actually decline somewhat before they reach the age of 35 years.

Are adults satisfied with their skills?

To try to determine whether the skills of various groups of adults are satisfactory in any general sense, e.g. from the point of view of society, seems an almost impossible task, and this has not been attempted in the present study. We have, however, asked the participating adults whether they personally find their reading and writing abilities sufficient

(a) for the tasks with which they are confronted in their work;

(b) for the activities in which they actually engage in their leisure time; and

(c) for the activities in which they would like to engage in their leisure time.

For the whole set of sixe questions (three for reading and three for writing ability) the percentage of adults who said they were not satisfied with their abilitities varied from 9 to 24. There is a ~~xxxxxx~~ significant correlation between satisfaction with one's skills and performance on the tests of these skills, but the coefficients are typically low: between 0.2 and 0.3. That is, the poor readers/writers regard their skills as insufficient somewhat more often than the average or above average readers/writers, but low ability does not preclude satisfaction with one's ability, and, conversly, even an ability well above average may be experienced as insufficient.

Very little is, unfortunately, known about the criteria upon which these self-evaluations are based, but it is nevertheless worth underlining that nearly one adult in four in our sample (23 per cent) finds his reading or writing abilities insufficient in view of the tasks met with at work. And nearly one adult out of three (32 per cent) finds his reading or writing abilities insufficient for the activities he would like to engage in during his leisure time.

Summary

The data collected in this study of Swedish adults' reading and writing abilities will be analyzed and discussed in much greater detail in the final report. The conclusions presented here should therefore be regarded as preliminary. Some general trends in the results seem, however, quite clear already at this stage.

The basic reading and writing skills of many adults can be expected to improve between the time they leave school and the time they reach the age of 35. This improvement, largely a result of informal education - the 'school of life', can partly compensate for insufficient schooling during adolescence. But prolonged schooling during adol-

escence apparently leads to even greater improvement in reading and writing ability.

A substantial minority of adults do not reach the minimum level of reading and writing ability which is considered necessary for functional literacy. However, the proportion of an age group which does not reach functional literacy seems to be reduced - perhaps halved - through increased schooling. Those who leave school with abilities which are insufficient for coping with the reading and writing tasks of adult life run a great risk of remaining at that low level of ability - or even suffer a decline in ability.

And, finally, more than 30 per cent of the adults studied have found their reading and writing abilities insufficient for at least some of the tasks they undertake - or would like to undertake if hey could trust their ability.

REFERENCES

GRUNDIN, H.U. (1975a), "The development of reading, writing and other communication skills during the comprehensive and upper secondary school years..." W.Latham (Ed.), The Road to Effective Reading. Proceedings of the Tenth Annual Study Conference of the UKRA, Totley-Thornbridge, July 1973. London: Ward Locl Educational, 1975. Pp. 139-147.

GRUNDIN, H.U. (1975b), "Judgment in the evaluation of reading ability." E.Hunter (Ed.), Reading Education: A UKRA Periodical. Summer 1975. Pp. 20-26.

GRUNDIN, H.U. (1975c), Läs- och skrivförmågans utveckling genom skolåren /The development of reading and writing ability throughout the school years/. In Swedish with a summary in English. In the National Board of Education series "Utbildningsforskning", No. 20. Stockholm: Liber Läromedel, 1975.

GRUNDIN, H.U. (1976a), "Evaluating competence in functional reading". J.E.Merritt (Ed.), New Horizons in Reading. Proceedings of the Fifth IRA World Congress on Reading, Vienna, Austria, August 1974. Newark: IRA, 1976. Pp. 198-207.

GRUNDIN, H.U. (1976b), "The reading and writing abilities of Swedish pupils: a survey of the development in from grade 1 to grade 12". A.Cashdan (Ed.), The Content of Reading. Proceedings of the Twelfth Annual Study Conference of the UKRA, Manchester, July 1975. Ward Lock Educational, 1976. Pp. 202-211.